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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/746,183	12/21/2000	Fredrick K. P. Klassen	END920000102US1	2908

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EXAMINER

KADING, JOSHUA A

ART UNIT	PAPER NUMBER
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2661

DATE MAILED: 03/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/746,183

Applicant(s)

KLASSEN ET AL.

Examiner

Joshua Kading

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, and 4-15 is/are rejected.
- 7) ☒ Claim(s) 1-15 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities: page 1 makes reference to a patent application, however the serial number for that application
5 is blank.

Appropriate correction is required.

Claim Objections

Claims 1-15 are objected to because of the following informalities:

10 Claim 1, line 3; claim 14, line 8; and claim 15, line 3 state "the network's" or "said network". There is no antecedent basis for these, and they should be changed to --a network-- and --a network's--, respectively.

Claim 1, line 7; and claim 14, line 12 state "the time". There is no antecedent basis for these, and they should be changed to --a time--.

15 Claim 1, line 10; claim 2, line 2; claim 11, lines 12-13; claim 14, line 16; and claim 15, lines 9-10 state "the... speed". There is no antecedent basis for these, and they should be changed to --a... speed--.

Claim 2, line 1; claim 3, line 1; claim 6, line 1; claim 7, line 1; claim 8, line 1; and claim 10, line 1 state "the step of". There is no antecedent basis for these, and they
20 should be changed to --a step of--.

Claim 2, lines 2-3 states "the best observed time". There is no antecedent basis for this, and it should be changed to --a best observed time--.

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Claim 2, lines 3-4; claim 5, line 2; claim 6, line 2; claim 12, line 10; and claim 13, line 11-12 state "the...packets". There is no antecedent basis for these, and they should be changed to --a...packets--.

5 Claim 4, line 2; and claim 9, line 2 state "the transmission of...bursts". There is no antecedent basis for these, and they should be changed to --a transmission of...bursts--.

Claim 5, lines 2-3 state "of a size equal to network maximum packet size". It should be changed to --of a size equal to a network maximum packet size--.

10 Claim 7, line 3 states "the ratio". There is no antecedent basis for this, and it should be changed to --a ratio--.

Claim 10, lines 3 and 4 state "the difference in size". There is no antecedent basis for this, and it should be changed to --a difference in size--.

Claim 11, line 2 states "the historical". There is no antecedent basis for this, and it should be changed to --an historical--.

15 Claim 11, line 10; and claim 15, line 7 state "the transit times". There is no antecedent basis for this, and it should be changed to --transit times--.

Claim 12, line 7; and claim 13, line 9 state "the elapsed time". There is no antecedent basis for this, and it should be changed to --an elapsed time--.

20 Claim 13, lines 3-4 state "the characteristics of a network". There is no antecedent basis for this, and it should be changed to --characteristics of a network--.

Claim 13, line 7 states "the receiver". There is no antecedent basis for this, and it should be changed to --a receiver--.

Claim 13, line 12 should have the word "for" deleted.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

5 The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

10

Claim 8 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

15

Claim 8 describes "adjusting average...utilization" when burst frames are discarded. How is this done? How are the burst frames incorporated into an adjusting of the average utilization? Page 31, lines 10-19 of the specification fail to explain how the utilization is adjusted when burst frames are discarded. There is no mention of an equation or any calculation used to adjust the utilization.

20

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

25

Claims 7-8, 12, and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5 Claims 7-8 recites the limitation "average burst rate" and "best burst rate" in lines 3-4. There is insufficient antecedent basis for this limitation in the claim.

10 Claim 12 discloses "system for evaluating the characteristics of a network". It is unclear if the system is an apparatus type of a computer program (method) type. Both apparatus (the nodes) and computer program (the speed analysis application) elements are disclosed in the claim, thus making it vague and indefinite. Applicant is also reminded that a computer program must be embodied on a computer related medium as per MPEP § 2106.04.B.1.

15 Claim 15 discloses "a computer program product or computer program element". It is unclear what a computer program product or element means. Are they the actual computer program? Or are they the medium that the program is delivered on? Applicant is also reminded that a computer program must be embodied on a computer related medium and be part of a statutory manufacture or machine as per MPEP § 2106.04.B.1.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

- 5 (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.
- 10

Claims 1, 2, and 4-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Kaplan et al. (U.S. Patent 6,473,404 B1).

15

Regarding claim 1, Kaplan discloses "method for evaluating a network, comprising the steps of:

executing a burst test to determine [a] network's streaming speed, said burst test including transmitting a plurality of packets over said network to a receiver (col. 6, lines 15-21); and

20

determining [a] time of receipt of each said packets by said receiver (col. 6, lines 15-21); and

responsive to said time of receipt of each said packets, calculating [a] current speed of said network (col. 5, lines 57-60 or equation 2)."

25

Regarding claim 2, Kaplan discloses "the method of claim 1, further comprising [a] step of: evaluating as [a] maximum speed of said network [a] best observed time of

receipt for [a] plurality of packets (col. 6, lines 48-53 where the smallest delay lead to the maximum speed)."

Regarding claim 4, Kaplan discloses "the method of claim 1, said transmitting
5 step comprising [a] transmission of logical best bursts (col. 2, lines 19-25 where the ordering of routes follows the definition of "logical best bursts" found in applicant's specification on page 27, lines 15-23 and page 28, lines 1-13)."

Regarding claim 5, Kaplan discloses "the method of claim 1, said transmitting
10 step comprising [a] transmission of packets of a size equal to network maximum packet size (MTU) (col. 5, lines 57-60 or equation 2, where the \$latency and the \$speed have been determined from claim 1, therefore the \$datasize, or maximum packet size, can be calculated by rearranging equation 2; this is now the speed at which transmissions will propagate)."

15

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

20 (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

25

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kaplan et al. in view of McKee et al. (U.S. Patent 5,477,531).

Regarding claim 6, Kaplan discloses the method of claim 5. Kaplan lacks
“determining said MTU as [a] maximum size of packets successfully transmitted without
5 fragmentation.” However, McKee discloses “determining said MTU as [a] maximum size
of packets successfully transmitted without fragmentation (col. 8, lines 12-17 where if
the delay or latency increases, the speed or data size must change according to
equation 2 of Kaplan, thus the maximum packet size must be the point at which the “line
breaks” in order to have the maximum packet size at the desired speed).” It would have
10 been obvious to one with ordinary skill in the art at the time of invention to include the
calculation of the maximum packet size with the method of claim 5 for the purpose of
having lower delay or latency. The motivation being that lower delay gives rise to faster
transmission speed.

15 Claims 9-11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable
over Kaplan et al. in view of applicant's admitted prior art.

Regarding claim 9, Kaplan discloses the method of claim 1. Kaplan lacks “said
transmitting step including [a] transmission of complex bursts in which short and long
20 frames are transmitted per test iteration.” However, applicant's admitted prior art
discloses “said transmitting step including [a] transmission of complex bursts in which
short and long frames are transmitted per test iteration (specification, page 6, lines 8-10

and 19-20)." It would have been obvious to one with ordinary skill in the art at the time of invention to include the complex bursts with the method of claim 1 for the purpose of determining the streaming speed of a network. The motivation being that knowing the streaming speed of a network allows for transmission of data at an optimal rate.

5

Regarding claim 10, Kaplan and applicant's admitted prior art disclose the method of claim 9. Kaplan lacks "determining the streaming speed of said network by dividing [a] difference in size of said short frames and said long frames by [a] difference in transmission time between short frames and long frames." However, applicant's
10 admitted prior art of record further discloses "determining the streaming speed of said network by dividing [a] difference in size of said short frames and said long frames by [a] difference in transmission time between short frames and long frames (specification, page 6, lines 19-20 and page 7, lines 1-3)." It would have been obvious to one with ordinary skill in the art at the time of invention to include the determining of the
15 streaming speed with the method of claim 9 for the same reasons and motivation as in claim 9.

Regarding claim 11, Kaplan discloses "method for establishing network characteristics including [an] historical, current, and predicted future of states of a
20 network for all types of network traffic, including interactive, browser, batch, and realtime traffic, comprising the steps of:

transmitting probative packets into said network (col. 6, lines 15-21)...;

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measuring transit times of said probative packets (col. 6, lines 15-21);
and responsive to said transit times, determining [a] streaming speed of said
network (col. 5, lines 57-60 or equation 2)."

Kaplan lacks "...said packets including echoed and non-echoed packets, of like
5 and differing lengths, of like and differing network priority, individually and in bursts..."

However, applicant's admitted prior art discloses "...said packets including
echoed and non-echoed packets, of like and differing lengths, of like and differing
network priority, individually and in bursts (specification, page 6, lines 8-20)..."

It would have been obvious to one with ordinary skill in the art at the time of
10 invention to include the different packet types with the rest of the method for the
purpose of having different testing schemes. The motivation being to compare results of
each scheme and determine a more realistic value for the network speed.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kaplan
15 et al.

Regarding claim 14, Kaplan discloses "a burst test...said burst test including
transmitting a plurality of packets over said network to a receiver (figure 1,
elements 12, 14, 16, 18, and 20 are receivers; col. 6, lines 15-21); and

determining [a] time of receipt of each said packets by said receiver (col. 6, lines
20 15-21); and

...responsive to said time of receipt of each said packets, calculating [a] current
speed of said network (col. 5, lines 57-60 or equation 2)."

Kaplan lacks "a computer useable medium having computer readable program code means embodied therein...to effect executing" the burst test. Although Kaplan does not explicitly disclose a computer useable medium having a computer code to execute the burst test, it would have been obvious to one with ordinary skill in the art to
5 implement the burst test using a computer program. The motivation being that to implement network test, such as a burst test, a computer program is the most efficient and feasible way of doing so.

Allowable Subject Matter

10 Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the
15 examiner should be directed to Joshua Kading whose telephone number is (703) 305-0342. The examiner can normally be reached on M-F: 8:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas Olms can be reached on (703) 305-4703. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

- 5 For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



10 JK
March 4, 2004

Joshua Kading
Examiner
Art Unit 2661



KENNETH VANDERPUYE
PRIMARY EXAMINER